

REMARKS

Applicants respectfully request reconsideration of this application, as amended.

Claim 11 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In response, Claim 11 has been amended to cancel the feature "less than 100 square millimeters," which has been added as new Claim 26. Applicants respectfully submit that the § 112 rejection has been overcome.

Claims 1, 9, 10, 12 and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by DE 198 45 436, which corresponds to US 6,928,925 (hereinafter "Mayer '925").¹ Claims 11 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mayer '925 in view of WO 00/20217, which corresponds to US 6,811,858 (hereinafter "Mayer '858").² Applicants respectfully traverse.

Independent Claims 1 and 19 Are Allowable Over Mayer '925

The present invention relates to a steel intaglio printing plate that includes a printing plate surface with at least one first area with steel intaglio structures and at least one second area with embossing structures. During the printing process, a substrate of a security document is pressed into the steel intaglio structures, and also into the embossing structures, so that, on the one hand, ink is drawn from the steel intaglio structures and adheres to the substrate surface and, on the other hand, the surface of the substrate is embossed in the area of the embossing structures, i.e., the surface is permanently deformed. *See, e.g.,* Specification at Paragraph 0011 (Pages 3–4). Applicants submit that Mayer '925 fails to teach or suggest all of the features recited by Claims 1 and 19.

In particular, Mayer '925 fails to teach or suggest that his engraved area 3b includes embossing structures. Instead, Mayer discloses that his engraved area 3b has a floor roughness pattern 7b, which merely holds the ink on the floor when Mayer's printing plate is used in an intaglio printing process. *See, e.g.,* FIG. 1; Col. 3:34–39. Importantly, Mayer '925 fails to teach or suggest that his floor roughness pattern 7b is embossed onto the final product, i.e., on the surface of the printed ink. As shown in FIGS. 1–3, the surfaces of Mayer's ink layers

¹ DE 198 45 436 is written in German.

² WO 00/20217 is written in German.

13a and 13b, as well as the depressions 11a and 11b of the data carrier 10, are smooth and do not have an embossed roughness pattern. Therefore, in contrast to the claimed invention, only macrostructures are embossed with Mayer's intaglio printing plate.

Furthermore, Mayer '925 fails to teach or suggest particular height dimensions for his floor roughness pattern 7b. Rather, Mayer's depths t_a and t_b of engraved areas 3a and 3b, respectively, denote the overall depths of depressions 7a and 7b, respectively. Thus, depth t_b of engraved area 3b does not, in particular, correspond to a distance "d" between the printing plate surface and those parts of the embossing structures which are closest to the printing plate surface, as claimed by the present invention.

Consequently, Mayer '925 fails to teach or suggest a height or lateral structural size of embossing structures that is of an order of magnitude in the range of 5 to 100 microns, or, a height or lateral structural size of embossing structures that is of an order of magnitude of less than 1 micron such that a diffractive relief structure can be embossed therewith, and parts of the embossing structures closest to the printing plate surface are located 20 microns to 100 microns below the printing plate surface, as recited by Claims 1 and 19. Moreover, Applicants submit that none of the remaining references, taken either singly or in combination with Mayer '925, teaches or suggests all of the features recited by Claims 1 and 19.

Accordingly, Claims 1 and 19 are allowable over the cited reference. Claims 9–13 and 26, depending from Claim 1, are also allowable, at least for the reasons discussed above.

Dependent Claims 11 and 13 Are Independently Allowable Over Mayer '925 in View of Mayer '858

The Office Action admits that Mayer '925 fails to teach to suggest all of the features recited by dependent Claims 11 and 13, and cites Mayer '858 in support of its § 103 rejection. *See*, Office Action at Paragraph 5 (Page 4). Applicants submit that Mayer '858 fails to cure the deficiencies of Mayer '925 with respect to these features.

Mayer '858 discloses a printing plate that enables printing of a large area by the intaglio printing process. In order to achieve this, Mayer '858 teaches that the overall area is separated into contiguous chambers, or channels, by means of separating lands or partitions. These partitions apparently prevent ink in the engraving from being removed from the engraved

surfaces when excess printing ink is wiped from the non-printing surface area. *See*, e.g., Col. 1:58 to Col. 2:7.

While Mayer '858 discloses a preferred range of distances "d" between partitions 4 (e.g., 20 microns to 150 microns apart; Col. 4:56–63), as well as partitions 4 that have a plateau formed on their upper end that is below the level of the printing plate surface 2 (e.g., 2 to 5 microns below; Col. 5:65 to Col. 6:17), Mayer '858 fails to teach or suggest a second area with embossing structures that has an area size of less than 400 square millimeters, as recited by Claim 11; or a second area with embossing structures that is separated from the first area with steel intaglio structures, or from another second area with embossing structures, by a separation bar extending as far as the printing plate surface or a molding plane, the separation bar having a width of at least 0.5 millimeters, as recited by Claim 13.

Accordingly, Claims 11 and 13 are independently allowable over the cited references.

CONCLUSION

In view of the amendments and remarks presented herein, Applicants respectfully submit that this application is in condition for allowance and should now be passed to issue.

A Notice of Allowance is respectfully solicited.

Alternatively, Applicants submit that the amendments presented herein place the claims in better form for consideration on appeal.

If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

The Commissioner is hereby authorized to charge any fees and to credit any overpayments that may be required by this paper under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 02-2135.

Respectfully submitted,

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